

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

**ORDER NO. 00-106**

**REVISION TO SITE CLEANUP REQUIREMENTS AND RESCISSION OF ORDER  
NO. 97-112 FOR:**

**NCH CORPORATION AND MOHAWK LABORATORIES**

for the property located at

932 KIFER ROAD  
COMMERCIAL STREET OPERABLE UNIT, SUBUNIT 1  
SUNNYVALE  
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Board), finds that:

1. **Site Location:** The Mohawk Laboratories ("Mohawk") site is located near the intersection of Commercial Street and Kifer Road in the City of Sunnyvale (Figure 1). The site covers approximately 11 acres, and the regional topography slopes gently toward the north. A warehouse and office building is located on the south and east portions of the site. The north and west portions of the site are unpaved. The surrounding areas are generally commercial and industrial.
2. **Site History:** Mohawk Laboratories is a division of NCH Corporation ("NCH," also known as National ChemSearch). Mohawk and NCH have owned and operated a chemical blending and distribution plant at the site since 1967. An above-ground tank farm with a capacity of 157,000 gallons was located on the site from 1967 to 1988. Chemicals stored in the tank farm included chlorinated solvents, methylene chloride, mineral spirits, kerosene, xylene, and isopropanol. Chemicals stored in the tank farm were transferred into an on-site blending/warehouse building prior to sale and distribution.
3. **Named Dischargers:** Mohawk is named as a discharger because it owns and operates the 932 Kifer Road facility. As a parent company and as co-owner of the site, NCH is also named as a discharger. Releases at the site by Mohawk have resulted in soil and groundwater pollution.

If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the site where it entered or could have entered waters of the state, the Board will consider adding that party's name to this order.

4. **Regulatory Status:** This site is subject to Site Cleanup Requirements Order No. 97-112, which was adopted September 17, 1997.

The purpose of this order is to update the previous Site Cleanup Requirements (SCR) to reflect the current understanding of the extent of off-site contamination gained from remedial investigations conducted since adoption of the existing SCR in 1997.

5. **Site Hydrogeology:** Hydrogeological conditions at the Mohawk site are similar to those at other groundwater pollution sites in the area. The area is underlain by unconsolidated sedimentary deposits of clay, silt, sand, and gravel extending to depths of at least 1,000 feet below the ground surface. These deposits have been subdivided into aquifers (water producing zones), and semi-permeable to relatively impermeable saturated zones (aquitards). At the Mohawk site, the shallow groundwater zone (A-zone) is encountered at approximately 10 feet below ground surface, and extends to approximately 30 feet below the ground surface. The groundwater gradient within the shallow A-zone slopes in a north-northeasterly direction. The B-zone is encountered at approximately 45 feet below the ground surface; the thickness of the B-zone is undetermined. Groundwater in the B-zone flows in a northwesterly direction.
6. **Remedial Investigation:** Subsurface investigations have revealed significant levels of organic chemical pollution in soil and groundwater beneath the site. Chemicals detected on-site include perchloroethylene (PCE), trichloroethylene (TCE), cis-1,2-dichloroethene (DCE), and non-fuel hydrocarbons (mineral spirits). The most significant pollution is located in the area beneath and immediately downgradient of the former above-ground tank farm. In this area, significant quantities of dissolved solvents and free-phase product, including dense non-aqueous phase liquids (DNAPL) and light non-aqueous phase liquids (LNAPL), have been identified in, and recovered from, the A-zone aquifer. Highly elevated levels of dissolved solvents (in concentrations ranging up to 496,000 ppb total VOCs) and significant free-phase product remain on-site, as detected in an April 2000 investigation.

Highly elevated levels of dissolved solvents and some free-phase product have also been detected (at concentrations ranging up to 350,000 ppb total VOCs in 1999) in the shallow groundwater aquifer in the offsite area immediately north/northeast of the Mohawk site. Low levels of VOCs have been detected in the B-zone in isolated areas north of the site. A plume of dissolved VOCs (predominantly cis-1,2-DCE), at concentrations exceeding 3,000 ppb, has impacted the A-zone at least to East Arques Avenue; thus, the plume

extends at least 2800 feet northward from the Mohawk release site. Additional investigation is necessary in the area north of East Arques Avenue to fully define the extent of A-zone groundwater pollution originating from the Mohawk site.

A workplan for further remedial investigation in the area north of East Arques Avenue has been approved, with work scheduled to commence in October 2000. The area to be investigated, shown in Figure 2, is bounded on the north by Stewart Drive, on the west by DeGuigne Drive, and on the east by the western boundary of the Stewart Drive Operable Unit (an adjacent area under Regional Board oversight consisting of commingled groundwater pollution plumes originating from sites formerly or presently owned or occupied by 999 Arques Corporation, CAE Electronics, and Sobrato Development Company).

7. **Interim Remedial Actions:** In 1993 three horizontal extraction wells were installed in the area of the former tank farm to remediate on-site contaminated soil and groundwater. In 1994, a vertical groundwater extraction well was installed near the northern site boundary. During seven years of operation, this on-site remediation system has removed over 25,000 pounds of organic solvents, including free-phase product (DNAPL and LNAPL), dissolved-phase VOCs, and soil vapor-phase VOCs.

To address off-site contamination in the area immediately north of the Mohawk site, and near the downgradient margin of the plume along East Arques Avenue, Mohawk installed recirculating cell wells as an interim remedial action (IRA) in 1999. After one year of operation, the recirculating cell wells have had no observable positive affect on groundwater VOC concentrations, and do not appear to be controlling migration of the off-site VOC plume. Additional IRAs must be implemented to address pollution originating from the Mohawk site in order to reduce the threat to water quality, public health, and the environment posed by the discharge of waste, and to provide a technical basis for selecting and designing final remedial actions. The new IRA selected for the area immediately north of the Mohawk site must be capable of removing or degrading large volumes of DNAPL, LNAPL, and dissolved-phase VOCs. The IRA selected for the downgradient plume margin must be capable of significantly reducing dissolved VOC concentrations and preventing further migration of the plume beyond East Arques Avenue. Existing remedial systems at nearby sites (at 974 and 999 East Arques Avenue) must be considered in the selection and design of IRA at the northern plume margin to ensure that the Mohawk IRAs complement, rather than diminish, the effectiveness of the neighboring remedial systems.

8. **Operable Unit and Subunits:** The groundwater VOC pollution plume originating from the Mohawk site has migrated northward at least to East Arques Avenue. The Mohawk plume has commingled with a separate VOC groundwater pollution plume originating from the former Fairchild Semiconductor Corporation ("Fairchild") site at 974 East Arques Avenue (referred hereafter as the "Fairchild site"). Fairchild and Applied

Materials, Inc. ("Applied Materials," the current site owner) are addressing groundwater pollution at the Fairchild site utilizing a groundwater pump and treatment system, a basement dewatering system, and an iron filing wall. A Final Remedial Action Plan (FRAP) addressing groundwater pollution at the Fairchild site was submitted by Fairchild on April 28, 2000, and approved by Board staff in September 2000. This FRAP recommended continued operation of the groundwater pump and treat system as the final remedial action for the groundwater pollution beneath the Fairchild site.

The area including the Mohawk and Fairchild pollution plumes is referred to as the Commercial Street Operable Unit (CSOU). To facilitate groundwater cleanup, the CSOU was divided into two subunits, with separate SCRs issued for each Subunit in 1997. The configuration of the CSOU and its subunits is shown in Figure 2. Subunit 1 consists of the Mohawk site and the VOC groundwater pollution plume that extends north/northeastward at least to East Arques Avenue (excluding the Fairchild site). Subunit 2 consists of the Fairchild site, and includes the VOC groundwater pollution that originates at that site and the VOC groundwater pollution plume migrating onto the site from Subunit 1. After the extent of any Mohawk-derived VOC contamination in the area north of East Arques Avenue has been defined, the northern boundary of Subunit 1 will be relocated northward so that the full length of the groundwater plume is contained within Subunit 1.

Mohawk and NCH, as the only confirmed source of VOC pollution within Subunit 1, are the dischargers named responsible for addressing groundwater pollution in Subunit 1. Mohawk, NCH, Fairchild, and Applied Materials are the dischargers named responsible for addressing pollution in Subunit 2.

The Board recognizes the discharger(s) named to each subunit are largely responsible for the most significant VOC groundwater pollution in the subunit. The dischargers are wholly responsible for addressing significant VOC groundwater pollution by meeting the requirements of this Order. As additional information is generated in each subunit, the Board may modify the dischargers named in each subunit and/or the boundaries of each subunit.

- 9. **Other Sites in the Area:** In addition to the Fairchild site, several other confirmed or potential sources of pollution exist in the vicinity of the Mohawk site. These sites include:

<u>Operable Unit 1</u>	
National Semiconductor Corporation	2900 Semiconductor Drive
United Technologies Corporation	1050 E. Arques Avenue
Advanced Micro Devices	1165 E. Arques Avenue

Stewart Drive Operable Unit

999 Arques Avenue Corporation  
Sobrato Development Company  
CAE Electronics

999 E. Arques Avenue  
968-970 Stewart Drive  
1077 East Arques Avenue

Confirmed and Potential Sources of VOC Pollution West of the CSOU

Pilkington Barnes Hind	895 Kifer Road
ICORE International	180 N. Wolfe Road
San Lazaro Properties	154, 158, and 162 San Lazaro Avenue
Philips Semiconductor	730 E. Evelyn Avenue
Philips Semiconductor	740 Kifer Road

Potential Sources of VOC Pollution Within the CSOU

John Lincoln Company	172 Commercial Street
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Remedial investigations have been performed, to varying degrees of completeness, at all of the above sites. The sites within Operable Unit 1 and the Stewart Drive Operable Unit, and the Pilkington Barnes Hind and Philips Semiconductor sites have implemented interim or final groundwater remediation systems. Additional investigation is required in the area to the west of CSOU (in the vicinity of San Lazaro Avenue and the Pilkington Barnes Hind site) to determine the source(s) of known VOC groundwater contamination in that area.

Staff are currently evaluating whether additional site investigations are needed within CSOU Subunit 1, in order to determine if additional sources contributed to the VOC groundwater pollution plume that originates at the Mohawk site. Since the existing SCR for CSOU Subunit 1 was issued in September 1997, closure letters have been issued to the Sunnyvale Corporation Yard, ProtoEngineering, Modern Machine, and Western Precision on the basis of remedial investigation reports demonstrating that significant releases to the groundwater did not occur at those sites. Should new data become available that contradicts these findings, additional investigation at these and other sites may be warranted. The Board may further modify the orders for the CSOU, depending on the results of future investigation(s).

10. **Basin Plan:** The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in 23 CCR 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

The potential beneficial uses of groundwater underlying and adjacent to the site include:

- a. Municipal and domestic water supply
- b. Industrial process water supply
- c. Industrial service water supply
- d. Agricultural water supply
- e. Freshwater replenishment to surface waters

At present, there is no known use of groundwater underlying the site for the above purposes.

11. **Other Board Policies:** Board Resolution No. 88-160 allows discharges of extracted, treated groundwater from site cleanups to surface waters only if it has been demonstrated that neither reclamation nor discharge to the sanitary sewer is technically and economically feasible.

Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally high contaminant levels.

Board Order No. 99-051 rescinded Order No. 94-087 (which expired July 1999), and reauthorized National Pollutant Discharge Elimination System (NPDES) General Permit No. CAG912003, which regulates discharge or reuse of extracted and treated groundwater resulting from the cleanup of groundwater polluted by volatile organic compounds.

12. **State Water Board Policies:** State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedance of applicable water quality objectives.

State Water Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this discharge. This order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

13. **Preliminary Cleanup Goals:** The discharger will need to make assumptions about future cleanup standards for soil and groundwater, in order to determine the necessary extent of remedial investigation, interim remedial actions, and the draft cleanup plan. Pending the establishment of site-specific cleanup standards, the following preliminary cleanup goals should be used for these purposes:
  - a. Groundwater: Applicable water quality objectives (e.g. maximum contaminant levels, or MCLs) or, in the absence of a chemical-specific objective, risk-based levels (e.g. drinking water equivalent levels).
  - b. Soil: 1 mg/kg total volatile organic compounds (VOCs), 10 mg/kg total semi-volatile organic compounds (SVOCs), and background concentrations of metals.
14. **Basis for 13304 Order:** The discharger has caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.
15. **Cost Recovery:** Pursuant to California Water Code Section 13304, the discharger is hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this order.
16. **CEQA:** This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.
17. **Notification:** The Board has notified the discharger and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe site cleanup requirements for the discharge, and has provided them with an opportunity to submit their written comments.
18. **Public Hearing:** The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

**IT IS HEREBY ORDERED**, pursuant to Section 13304 of the California Water Code, that the discharger (or its agents, successors, or assigns) shall cleanup and abate the effects described in the above findings as follows:

## A. PROHIBITIONS

1. The discharge of wastes or hazardous substances in a manner that will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.
2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of wastes or hazardous substances are prohibited.

## B. TASKS

### 1. REMEDIAL STRATEGY REPORT

COMPLIANCE DATE: October 27, 2000

Submit a technical report, acceptable to the Executive Officer, that proposes an overall approach for remediation of the VOC groundwater pollution plume in Subunit 1 of the Commercial Street Operable Unit. The report must include:

- a. A summary of the current status of interim remedial actions that have been implemented on the Mohawk site and in the off-site areas.
- b. An approach for mass removal or *in situ* degradation of free-phase and dissolved-phase VOCs from the Mohawk source area, which is interpreted to include the Mohawk site, the VOC "hot spot" near the Atlas Heater property, and the "northeast sand channel" that connects these areas; and an approach for controlling further migration of dissolved VOCs from this source area.
- c. An approach for preventing further migration of the VOC plume at its downgradient end, and long-term reduction of VOC concentrations within the plume.

The Remedial Strategy Report should propose effective interim remedial actions (IRA) to achieve prompt control of plume migration, as well as cost-effective long-term remedial solutions. The report should present an analysis of all remedial methodologies that have been considered to facilitate remedial design.

2. **EXPANDED REMEDIAL INVESTIGATION REPORT**

COMPLIANCE DATE: December 15, 2000

Submit a technical report, acceptable to the Executive Officer, presenting the results of the remedial investigation (RI) of groundwater pollution in the area north of East Arques Avenue. To be acceptable to the Executive Officer, this remedial investigation must fully delineate the extent of Mohawk-derived VOC contamination in the area north of East Arques Avenue. The RI report must include maps of boring locations, water elevations, and concentrations of all VOCs detected in groundwater samples collected from each borehole. The RI report must document compliance with all tasks specified in the investigation workplan (Risk-Based Decisions, July 7, 2000), as well as with all conditions specified by Board staff in its approval of the workplan (RWQCB, July 31, 2000).

3. **WORKPLAN FOR EXPANDED INTERIM REMEDIAL ACTIONS, EAST ARQUES AVENUE AREA**

COMPLIANCE DATE: February 28, 2001

Submit a workplan, acceptable to the Executive Officer, to guide implementation of effective interim remedial actions (IRA) to prevent migration of VOC pollution from beyond East Arques Avenue. The workplan must also propose a solution for remediation of any Mohawk-derived contamination in the area north of East Arques Avenue. The workplan should discuss all remedial alternatives that were considered, specify which methodology was selected for implementation, and provide a rationale for the selection. The selected IRA must be designed to complement the effectiveness of the existing remedial systems at the neighboring sites (at 974 and 999 East Arques Avenue). The workplan must include a proposed time schedule for implementation of the selected IRA. All proposed tasks should be described in detail.

4. **WORKPLAN FOR EXPANDED INTERIM REMEDIAL ACTIONS, MOHAWK SITE/ATLAS HEATER SOURCE AREA**

COMPLIANCE DATE: May 30, 2001

Submit a workplan, acceptable to the Executive Officer, to guide implementation of effective interim remedial actions to reduce high levels of dissolved VOCs and free product on the Mohawk site and in the area immediately downgradient of the

Mohawk site (the "northeast channel"/Atlas Heater "hotspot" area). The workplan should discuss all remedial alternatives that were considered, specify which methodology was selected for implementation, and provide a rationale for the selection. The workplan must include a proposed time schedule for implementation of the selected IRA. All proposed tasks should be described in detail.

5. **COMPLETION OF EXPANDED INTERIM REMEDIAL ACTIONS, EAST ARQUES AVENUE AREA**

COMPLIANCE DATE: To be set according to the Task B.3 schedule, as approved by the Executive Officer

Submit a technical report, acceptable to the Executive Officer, documenting completion of necessary tasks identified in the Task B.3 workplan.

6. **COMPLETION OF EXPANDED INTERIM REMEDIAL ACTIONS, MOHAWK SITE/ATLAS HEATER SOURCE AREA**

COMPLIANCE DATE: To be set according to the Task B.4 schedule, as approved by the Executive Officer

Submit a technical report, acceptable to the Executive Officer, documenting completion of necessary tasks identified in the Task B.4 workplan.

7. **PROPOSED FINAL REMEDIAL ACTIONS AND CLEANUP STANDARDS**

COMPLIANCE DATE: December 15, 2002

Submit a technical report, acceptable to the Executive Officer, containing:

- a. Results of on-site and off-site remedial investigations
- b. Evaluation of the installed interim remedial actions
- c. Feasibility study evaluating alternative final remedial actions
- d. Risk assessment for current and post-cleanup exposures
- e. Recommended final remedial actions and cleanup standards
- f. Implementation tasks and time schedule

Item c should include projections of cost, effectiveness, benefits, and impact on public health, welfare, and the environment of each alternative action. Items a through c should be consistent with the guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300), CERCLA guidance documents with respect to remedial investigations and feasibility studies, Health and Safety Code Section 25356.1(c), and State Board Resolution No. 92-49 as amended ("Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304").

Items a through e should consider the preliminary cleanup goals for soil and groundwater identified in finding 13.

8. **Delayed Compliance:** If the discharger is delayed, interrupted, or prevented from meeting one or more of the completion dates specified for the above tasks, the discharger shall promptly notify the Executive Officer and the Board may consider revision to this Order.

### C. PROVISIONS

1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).
2. **Good Operation and Maintenance (O&M):** The discharger shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.
3. **Cost Recovery:** The discharger shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by the discharger over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.
4. **Access to Site and Records:** In accordance with California Water Code Section 13267(c), the discharger shall permit the Board or its authorized representative:

- a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
  - b. Access to copy any records required to be kept under the requirements of this Order.
  - c. Inspection of any monitoring or remediation facilities installed in response to this Order.
  - d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.
5. **Self-Monitoring Program:** The discharger shall comply with the Self-Monitoring Program as attached to this Order and as may be amended by the Executive Officer.
6. **Contractor / Consultant Qualifications:** All technical documents shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, or a California registered civil engineer.
7. **Lab Qualifications:** All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g. temperature).
8. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided within two weeks of the established task deadline to the following recipients:
- a. Mr. Ron Staricha, City of Sunnyvale
  - b. Mr. Ben Gale, Santa Clara County Department of Environmental Health
  - c. Ms. Seena Hoose, Santa Clara Valley Water District

The Executive Officer may modify this distribution list as needed.

9. **Reporting of Changed Owner or Operator:** The discharger shall file a written report on any changes in site occupancy or ownership associated with the property described in this Order. This report shall be filed with the Board within 30 days following a change in site occupancy or ownership.

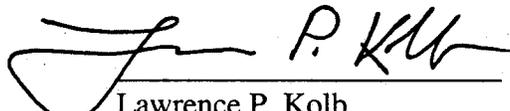
10. **Reporting of Hazardous Substance Release:** If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the discharger shall report such discharge to the Regional Board by calling (510) 622-2300 during regular office hours (Monday through Friday, 8:00 to 5:00).

A written report shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

This reporting is in addition to reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.

11. **Rescission of Existing Order:** This Order supersedes and rescinds Order No. 97-112.
12. **Periodic SCR Review:** The Board will review this Order periodically and may revise it when necessary. The discharger may request revisions and upon review the Executive Officer may recommend that the Board revise these requirements.

I, Lawrence P. Kolb, Acting Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 18, 2000.

  
Lawrence P. Kolb  
Acting Executive Officer

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FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO: IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE SECTIONS 13268 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY

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Attachments: Site Maps  
Self-Monitoring Program

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

**SELF-MONITORING PROGRAM FOR:**

**NCH CORPORATION AND MOHAWK LABORATORIES**

for the property located at

932 KIFER ROAD  
COMMERCIAL STREET OPERABLE UNIT, SUBUNIT 1  
SUNNYVALE  
SANTA CLARA COUNTY

1. **Authority and Purpose:** The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Board Order No. 00-106 (site cleanup requirements).
  
2. **Monitoring:** The discharger shall measure groundwater elevations quarterly in all monitoring wells listed in the table below, according to a schedule developed in coordination with other dischargers in the area. Representative samples of groundwater shall also be collected and analyzed according to the following schedule:

Well #	Sampling Frequency	Well Location	Well #	Sampling Frequency	Well Location
BC-02	SA	On Site	BC-13	SA	Kifer-Central
BC-02B	SA	On Site	BC-14	Q	Kifer-Central
BC-03	SA	On Site	BC-15	Q	Kifer-Central
BC-03B	SA	On Site	BC-16	SA	Kifer-Central
BC-04	SA	On Site	BC-17	Q	Kifer-Central
BC-05A	SA	On Site	BC-18	SA	Kifer-Central
BC-06	SA	On Site	BC-19	SA	Kifer-Central
BC-11	SA	On Site	RBD-01	SA	Kifer-Central

BC-12	SA	Kifer-Central	RBD-02	SA	Kifer-Central
RBD-03	Q	Kifer - Central	WA-02	SA	Central-Arques
RBD-04	SA	Kifer - Central	WA-03	SA	Central-Arques
RCW-06	SA	Kifer - Central	WA-04	SA	Central-Arques
RCW-07	Q	Kifer - Central	WA-06	SA	Central-Arques
PZ-03C	Q	Kifer - Central	WA-08	SA	Central-Arques
PZ-07B	SA	Kifer - Central	WA-10	SA	Central-Arques
PZ-08C	SA	Kifer - Central	WA-11	SA	Central-Arques
PZ-09B	SA	Kifer - Central	MW-16	SA	Central-Arques
PZ-11B	SA	Kifer - Central	WP-1	SA	Central-Arques
PZ-12B	SA	Kifer - Central	WP-2	SA	Central-Arques
PZ-14C	SA	Kifer - Central	E-1	SA	Central-Arques
PZ-16B	Q	Kifer - Central	E-2	Q	Central-Arques
PZ-17B	Q	Kifer - Central	E-3	Q	Central-Arques
PZ-1006C	SA	Central XPress	E-4	Q	Central-Arques
PZ-1009B	SA	Central XPress	NPZ-1	Q	Subunit 2
PZ-1015C	SA	Central XPress	NPZ-2	Q	Central-Arques
PZ-1024B	SA	Central XPress	NPZ-3	Q	Subunit 2
PEB-4	SA	Kifer - Central	PB-3	Q	Subunit 2
PMW-1	SA	Kifer - Central	PB-6	Q	Subunit 2
PMW-2	SA	Kifer - Central	M-06A	Q	Subunit 2
PMW-3	SA	Kifer - Central	MW-1	Q	Arques-Stewart
PMW-4	SA	Kifer - Central	MW-2	Q	Arques-Stewart
MMW-1	SA	Central-Arques	MW-3	Q	Arques-Stewart
MMW-2	SA	Central-Arques	47S/D	Q	Arques-Stewart
MMW-3	SA	Central-Arques	48S/D	Q	Arques-Stewart

Key: SA = Semi-Annually      Q = Quarterly

Groundwater monitoring wells indicated for quarterly sampling shall be sampled in January, April, July, and October of each year. Wells indicated for semi-annual sampling shall be sampled in April and October. All samples shall be analyzed by EPA Methods 8010/8015M or equivalent. Any new monitoring or extraction wells shall be sampled quarterly and analyzed for the same constituents as samples from existing wells. The discharger or Regional Board staff may propose changes in the above table; any proposed changes are subject to Executive Officer approval.

3. **Semi-Annual Monitoring Reports:** The discharger shall submit semi-annual monitoring reports to the Board no later than 30 days following the end of the second and fourth quarters. The reports shall include:
  - a. **Transmittal Letter:** The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the discharger's principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.
  - b. **Groundwater Elevations:** Groundwater elevation data shall be presented in tabular form, and a groundwater elevation contour map shall be prepared for each monitored water-bearing zone. These maps should include groundwater elevations from all wells listed in the table in Item 2. Historical groundwater elevations shall be included in the second semi-annual report each year.
  - c. **Groundwater Analyses:** Groundwater sampling data shall be presented in tabular form, and isoconcentration maps should be prepared for key contaminants (PCE, TCE, cis-1,2-DCE, and non-fuel hydrocarbons) for each monitored water-bearing zone. These maps should include groundwater contaminant concentrations from all wells listed in the table in Item 2. The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. Historical groundwater sampling results shall be included in the second semi-annual report each year. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping - below).
  - d. **Groundwater Extraction:** If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the site as a whole, expressed in gallons per minute and total groundwater volume for the quarter. The report shall also include contaminant removal results, from groundwater extraction wells and from other remediation systems (e.g. soil vapor extraction), expressed in units of chemical mass per day and mass for the quarter.

Historical mass removal results shall be included in the second semi-annual report each year.

- e. **Status Report:** The semi-annual report shall describe relevant work completed during the reporting period (e.g. site investigation, interim remedial measures) and work planned for the following reporting period.
4. **Violation Reports:** If the discharger violates requirements in the Site Cleanup Requirements, then the discharger shall notify the Board office by telephone as soon as practicable once the discharger has knowledge of the violation. Board staff may, depending on violation severity, require the discharger to submit a separate technical report on the violation within five working days of telephone notification.
5. **Other Reports:** The discharger shall notify the Board in writing prior to any site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for site investigation.
6. **Record Keeping:** The discharger or his/her agent shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Board upon request.
7. **SMP Revisions:** Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the discharger. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.

I, Lawrence P. Kolb, Acting Executive Officer, hereby certify that this Self-Monitoring Program was adopted by the Board on October 18, 2000.

  
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Lawrence P. Kolb  
Acting Executive Officer